



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,525	09/18/2001	Leonard Alan Collins	171328.01	8577

22971 7590 03/12/2007
MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052-6399

EXAMINER

SHAW, PELING ANDY

ART UNIT	PAPER NUMBER
----------	--------------

2144

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jranck@microsoft.com
roks@microsoft.com
ntovar@microsoft.com

Office Action Summary	Application No.	Applicant(s)	
	09/955,525	COLLINS, LEONARD ALAN	
	Examiner	Art Unit	
	Peling A. Shaw	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

pgs

DETAILED ACTION

Continued Examination under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/13/2006 has been entered. Claims 43-44, 46-48, 50-52, 64-67 and 69 are amended. Claims 43-69 are currently pending.
2. Amendment received on 07/26/2006 was entered into record. Claim 69 was amended.
3. Amendment received on 02/15/2006 was entered. Claims 28-42 were cancelled. Claims 43-69 were new.
4. Amendment received on 06/30/2005 was entered. Claims 1-27 were cancelled. Claims 28-42 were new.

Priority

5. This application has no priority claim made. The filing date is 09/18/2001.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srisuresh et al. (US 6058431 A), hereinafter referred as Srisuresh, and further in view of Berg et al. (US 6674713 B1), hereinafter referred as Berg.

- a. Srisuresh disclosed (claim 43) a method for enabling outside-initiated traffic flows over a network and through a network address translator from an outside device to a device behind the network address translator, the method performed by the device behind the network address translator, the method comprising: creating a message addressed to the outside device and configured to enable the network address translator to create an address mapping; sending the message such that the message is processed by the network address translator, such that the address mapping is created; and such that the outside device can initiate a traffic flow with the inside device via the network address translator and the address mapping (column 5, line 45-column 6, line 11, Fig. 2: PC108a initiates an outbound session and transmits data with locally significant IP address to be translated to a globally significant address by the stub router 106). Srisuresh does not explicitly show (claim 43) the message further configured to be discarded by the network or the outside device.
- b. Berg shows (claim 43) the message further configured to be discarded by the network or the outside device (column 22, lines 25-44: NUL segment is used to determine if the other side is still alive and discarded thereafter) in an analogous art for the purpose of method and apparatus for providing continuous voice and call communications between a data network and a telephony network.

- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Srisuresh's functions of system and method for network address translation as an external service in the access server of a service provider with Berg's functions of using and processing null packet.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use a null packet for keeping packet data connection alive per Berg's teaching (column 22, lines 25-44) in providing network accessing control per Srisuresh (column 2, lines 27-45: using a network address translator on an access server for locally and globally IP address translation) and Berg (column 17, lines 9-17: RUDP is used as a simple packet based transport protocol and provides reliable in-order delivery for virtual connection)'s teaching.
- e. Regarding claim 44, Berg shows wherein the message includes a NULL content field (column 22, line 25-44: NUL segment).
- f. Regarding claims 45 and 48, applicant shows in the applicant's specification, i.e. paragraphs 2-3 and 5 further wherein the network address translator is a plurality of network address translators coupled in series; and wherein the outside device is behind an additional network address translator. Srisuresh also shows the service provider access server and stub router could each serve as NAT (Fig. 2-5 and 7).
- g. Regarding claim 46, Srisuresh shows wherein the creating and the sending of the message is initiated by a network communications stack (column 4, lines 17-37: UDP or TCP).

- h. Regarding claim 47, Srisuresh shows wherein the creating and the sending of the hole-punching message is initiated by a program (column 8, line 49-53, Fig. 6).
- i. Regarding claim 49, Srisuresh shows wherein the method is embodied in computer-executable instructions stored on computer-readable media (column 8, line 49-53, Fig. 6).
- j. Claims 50-51, 53-56, 61 and 64-65 are of the same scope as claims 43, 45 and 48. These are rejected for the same reasons as for claims 43, 45 and 48.
- k. Regarding claim 57, Srisuresh shows wherein wherein the unique address mapping includes a public address of the remote device (column 5, line 61-62: IP destination address).
- l. Regarding claim 58, Srisuresh shows wherein wherein the unique address mapping includes a private address of the local device (column 5, line 59-60: locally significant source IP address).
- m. Regarding claim 59, Srisuresh shows wherein wherein the unique address mapping is operative for communications formatted using Transmission Control Protocol (column 4, lines 17-37: TCP).
- n. Regarding claim 60, Srisuresh shows wherein wherein the unique address mapping is operative for communications formatted using User Datagram Protocol (column 4, lines 17-37: UDP).
- o. Regarding claim 62, Srisuresh shows wherein the local device is coupled to the network address translator via a private network (column 4, lines 17-37: private address domain).

Art Unit: 2144

- p. Regarding claim 63, Srisuresh shows wherein the network address translator is coupled to the remote device via the Internet (column 4, lines 17-37: public address domain, IP v.4).
- q. Claims 52 and 66 are of the same scope as claims 59-60. These are rejected for the same reasons as for claims 59-60.
- r. Claims 67-69 are of the same scope as claims 43 and 59-60. These are rejected for the same reasons as for claims 43 and 59-60.

Together Srisuresh and Berg disclosed all limitations of claims 43-69. Claims 43-69 are rejected under 35 U.S.C. 103(a).

Response to Arguments

7. Applicant's arguments filed on 12/13/2006 have been fully considered, but they are not persuasive.
- a. Applicant has amended the claim language substantially. Examiner has reviewed the claim language changes against the original specification and claim language. Examiner has also reviewed previous presented claim language and associated office action. The current claim language change in regarding to discarding a message by the network or the outside device is previously addressed in the now cancelled claim 29. Examiner has previously used Berg et al. (US 6674713 B1) to address this limitation. Examiner has further searched and identified an additional art, i.e. Boyle et al. (US 6978383 B2) and listed it in the Remark section below. Boyle seems to be particular relevant to the current application as Berg does.
 - b. The claim rejection sections are updated to reflect the claim language changes per applicant's current amendment.
 - c. It is the Examiner's position that Applicant has not submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art. As it is Applicant's right to claim as broadly as possible their invention, it is also the Examiner's right to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique (see items a-d in section 6). As it is well known in the art of network address

translation/router system as described in the Background of Invention of applicant's specification and Srisuresh respectfully. The additional function of discarding Null packet per applicant's claimed invention seems to be a standard protocol processing as shown by Berg. The additional prior art identified by examiner, i.e. Boyle et al. (US 6978383 B2) has further shown covering applicant's claimed invention. It is clear that Applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that discloses distinctive features of Applicant's claimed invention. It is suggested that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above or the Remark section below to draw an amended claim set to further the prosecution.

- d. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Remarks

8. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Egevang et al. (RFC 163, May 1994) The IP Network Address Translator
- b. BODEN et al. (US 6266707 B1) System and method for IP network address translation and IP filtering with dynamic address resolution
- c. Boyle et al. (US 6978383 B2) Null-packet transmission from inside a firewall to open a communication window for an outside transmitter

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pas

pas


WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100